

| Review Number                                   | Review Title   | Review Date  |
|---|--|--|
| PSC-2020-TYSSR-S18                              | Three Year Sector Safety Review of Bio-CAT Sector 18 | September 25, 2020   |
| Scope / Agenda                                  |  | Review Team  |
| Bio-CAT   | ES&H Plan Implementation                             | John Connolly<br>Nena Moonier<br>Paul Rossi<br>Mike Fries<br>Patti Pedergrana<br>Liz Schmidt<br>Steve Davey<br>Ken Belcher<br>Merrick Penicka<br>Beth Heyeck |
|   | Sector 18 Specific Safety Issues                     |  |
| PSC/AES   | Configuration Control Records                        | Tom Irving<br>Mark Vukonich  |
|   | RSS Component Survey & Alignment Update              |  |
|   | RSS Interface Identification                         |  |
|   | PSS User Requirements Specification                  |  |
|   | Ray Traces, Operational Envelope, Design Reviews     |  |
|   | Health Physics Survey Records                        |  |
| ES&H Walk-Through                               | ES&H Inspection Records                              |  |
|   | LOM 435-B office areas, laboratories                 |  |
|   | Sector 18 beamlines, control areas, egress aisles    |  |
|   |  |  |
| Review Chair                                    | ESH/QA Representative                                | Responsible Manager  |
| Nena Moonier                                    | Paul Rossi   | John Connolly  |
| <b>Executive Summary:</b>                       |  |  |
| Bio-CAT's TYSSR was held on September 25, 2020. |  |  |

**Section 1: TYSSR criteria are based upon APS User Safety Policies and Procedures, APS Procedure 3.1.102, Section Beamline Facilities Reviews (Formerly AP&P 3.1.18, APS document number APS\_118581)**

| Agenda Items / Review Criteria |   | Discussion / Objective Evidence                          | Action Required                         |
|--------------------------------|---|--|---|
| 1.                             | Date of last TYSSR  | June 28, 2017  | None                                    |
| 2.                             | Beamline management presents a summary of the ES&H program and notes changes, if any, since the last TYSSR. | Mark Vukonich presented the Bio-CAT Safety Presentation. | Presentation will be uploaded into ICMS |

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|--------------------------------|--|---|--|
| 3.                             | Committee records concerns raised by Sector Personnel  | M. Fries mentioned that there is still no resolution regarding the installation of railings on the A hutch roof. Cable trays on the A hutch railing do not count as a railing. M. Fries has been in contact with R. Heurich regarding this issue. | N. Moonier emailed A. Wayman (FC) requesting that she work with R. Heurich to put in a request with the MOM group to determine the status of the project and what further actions need to be taken in order to install the railings. P. Pedergrana copied on N. Moonier's email. |
| 4.                             | Committee reports outstanding action items, if any, from last TYSSR  | None  | None   |
| 5.                             | Each partner user group operating a beamline shall:  | <i>See sub-items.</i>   |  |
| 6.                             | Review beamline safety program and ES&H plan at least once every thirty-six months; revise them, as needed, and provide ES&H plan to APS User Safety Officer for approval. | The Bio-CAT safety plan has been reviewed and approved by P. Rossi and N. Moonier. The Plan is in ICMS: APS_2170222   | None   |
| 7.                             | Review beamline safety assignments annually and reassign responsibilities or create new roles, as needed; notify USO of changes in personnel assigned to ES&H roles.       | Communicated through monthly data check of Beamline HR Admin application.   | None   |
| 8.                             | The committee verifies that the following records are on file and consistent with the beamline:  | <i>See sub-items.</i>   |  |
| 9.                             | Review/approval records for modifications to beamline safety systems since last TYSSR  | There have been no modifications to 18-ID since the previous TYSSR.   | None   |

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|--------------------------------|--|--|-----------------|
| 10.                            | Configuration control list   | Current as of the beginning of the last run.   | None            |
| 11.                            | Administrative Restrictions  | There are no Administrative Restrictions at this time.   | None            |
| 12.                            | RSS component survey and alignment worksheets  | Sector 18 was last surveyed during the December 2019/January 2020 shutdown.                                      | None            |
| 13.                            | RSS interface Document   | ICMS Content ID APS_1218084  | None            |
| 14.                            | PSS user requirements specification  | ICMS Content ID APS_1181473  | None            |
| 15.                            | Sector floor plan, including egress aisles and work areas  | ICMS Content ID APS_1443616  | None            |
| 16.                            | Beamline layouts showing major radiation safety shielding components   | ICMS Content ID APS_1443617  | None            |
| 17.                            | Synchrotron and Bremsstrahlung ray trace drawings for all operating modes  | ICMS Content ID APS_1413698  | None            |
| 18.                            | Design drawings of RSS components that show functionality, shielding and aperture dimensions, and shielding material | See RSS Reference Table ICMS Content ID APS_1426771  | None            |
| 19.                            | Thermal analysis for RSS components connected to PSS water flow  | ICMS Content ID APS_1423331  | None            |
| 20.                            | Assembly drawings for x-ray shielded enclosures  | 18-ID-A APS_TECKNIT3135<br>18-ID-C APS_TECKNIT3136<br>18-ID-D APS_TECKNIT3204                                    | None            |
| 21.                            | Date of last Health Physics routine survey   | The last Health Physics routine survey of Sector 18 was conducted in October 2019. There were no issues of note. | None            |

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|--------------------------------|---|--|-----------------|
| 22.                            | ES&H coordinator provides recent ES&H inspection reports and identifies open safety issues, if any. | The last safety walk-through for Sector 18 was completed on September 10, 2019. All minor issues noted were addressed by the beamline. No outstanding issues remain. | None            |
| 23.                            | Committee and beamline personnel discuss opportunities for improving the process                    | None   | None            |

**Section 2: Safety Walk-Through was not held on the day of the review. Review held virtually due to the Lab operating in Limited Operations.**

**ICMS Workflow Approvals Required**

Nena Moonier (Assessment Team Leader)  
 Paul Rossi (Assessment Team Member)  
 Mike Fries (Assessment Team Member)  
 Patti Pedergrana (Assessment Team Member)  
 Elizabeth Schmidt (Assessment Team Member)  
 John Connolly (Responsible Manager)

**File / Distribution:**

- PSC Deputy Assoc. Lab Director - Operations (Approver)
- CAT or XSD Division Director
- Sector Personnel and Safety Coordinator
- User Safety Officer
- PSC ESH/QA Representative
- User Experiment Oversight
- APS User Technical Interface
- AES-EFO Group

**Supporting Documents:**

Bio-CAT Sector 18 Three-Year Sector Safety Review Notification Letter (APS\_2170235)  
 Bio-CAT Sector 18 Three-Year Sector Safety Review Agenda (APS\_2170236)  
 Bio-CAT Sector 18 Three-Year Sector Safety Review Meeting Minutes (APS\_2170237)  
 Bio-CAT Sector 18 Three-Year Sector Safety Review Presentation (APS\_2170238)